

Attorney Docket No.: WON-0002  
Inventors: Kim et al.  
Serial No.: 10/511,719  
Filing Date: November 26, 2004  
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This listing of the claims will replace all prior versions and listings of claims in the application:

**Listing of the claims:**

Claims 1-32 (canceled)

Claim 33 (currently amended): A method for detecting damage to kidneys diagnostic for renal disease at an early stage prior to showing clinical troubles in a subject, comprising the following steps:

- a) providing a urine sample from the subject;
- b) measuring an amount of Transforming growth ~~factor~~ factor- $\beta$  induced gene-h3 ( $\beta$ ig-h3) protein in the urine sample; and
- c) determining if damage to the kidneys diagnostic for renal disease is present in the subject, based on the measured amount of  $\beta$ ig-h3 protein of the urine sample being increased as compared to a normal urine sample.

Claim 34 (previously presented): The method as set forth in claim 33, wherein the measuring of  $\beta$ ig-h3 protein in step b) is carried out by an antigen-antibody reaction.

Claim 35 (previously presented): The method as set forth in claim 34, wherein the antigen-antibody reaction is performed by a method selected from the group consisting of immunoblotting, immunoprecipitation, enzyme-linked immunosorbent assay, radioimmunoassay, protein chip, and microarray.

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Claim 36 (currently amended): The method as set forth in claim 34, wherein the antigen-antibody reaction comprises the following steps:

- a) reacting an antibody against a recombinant protein of  $\beta$ ig-h3 or  $\beta$ ig-h3 fasciclin-1 (fas-1) domain with the urine sample to form a reactant;
- b) adding the reactant from step a) to a matrix coated with the recombinant protein of  $\beta$ ig-h3 or  $\beta$ ig-h3 fas-1 domain;
- c) adding a secondary antibody to the reactant and matrix of step b); and
- d) measuring optical density (OD).

Claim 37 (previously presented): The method as set forth in claim 36 wherein the recombinant protein of  $\beta$ ig-h3 is human  $\beta$ ig-h3 protein (SEQ ID NO: 3) or mouse  $\beta$ ig-h3 protein (SEQ ID NO:5).

Claim 38 (previously presented): The method as set forth in claim 36, wherein the recombinant protein of  $\beta$ ig-h3 fas-1 domain comprises 1 to 10 linked 4th fas-1 domains encoded by SEQ ID NO:6.

Claim 39 (withdrawn): The method as set forth in claim 38, wherein the recombinant protein of  $\beta$ ig-h3 fas-1 domain is selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9 and SEQ ID NO:10.

Claim 40 (currently amended): A kit for detecting damage to kidneys diagnostic of renal disease at an early stage prior to showing clinical troubles, comprising a recombinant protein of  ~~$\beta$ ig-h3~~ or  $\beta$ ig-h3 fas-1 domain

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consisting of 1 to 10 linked 4th fas-1 domains encoded by SEQ ID NO:6, and an antibody thereof against the recombinant protein of  $\beta$ ig-h3 fas-1 domain.

Claim 41 (previously presented): The kit as set forth in claim 40, further comprising a buffer solution, a secondary antibody, a washing solution, a stop solution or a colorimetric substrate.

Claim 42-43 (canceled)

Claim 44 (currently amended): The kit as set forth in ~~claim 43~~ claim 40, wherein the recombinant protein of  $\beta$ ig-h3 fas-1 domain is selected from the group consisting of sequences represented by SEQ. ID. No 7, No 8, No 9 and No 10.